SMALL BUSINESS CLEAN AIR ADVISOR

ENVIRONMENTAL INFORMATION FOR WISCONSIN SMALL BUSINESSES

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Coating Clean: Small Business and Hazardous Air Pollution Rules

Manufacturers and coaters of metal and plastic parts and products, and wood and fabric goods will have new hazardous air pollution (HAP) rules. The Environmental Protection Agency (EPA) is working on rules affecting these industries. EPA expects to have the proposed rules drafted and ready for comment sometime this fall.

On July 18, Wisconsin downlinked a satellite broadcast to six sites around the state. Representatives from EPA and industry explained the new rules and discussed options to either meet or avoid the rule requirements.

Wisconsin's Small Business Clean Air Assistance Program (SBCAAP) sent out postcards and a statewide news release notifying sources about this broadcast. If your facility uses a Standard Industrial Classification Code (SIC) that was included on the EPA list of potentially affected industries and you have between five and 100 employees, you should have received the postcard. Industries in those SICs with less than five employees are not likely to have enough emissions to be affected by the rules.

Rule Categories

The five new HAP rules apply to the following industrial categories, each of which include multiple SICs:

- ✔ Miscellaneous Metal Parts and Products
- ✔ Metal Furniture
- ✔ Plastic Parts and Products
- ✔ Fabric Printing, Coating and Dyeing
- ✔ Wood Building Products

While the rules are not yet final, the broadcast was useful in providing case studies of businesses that had successfully made changes allowing them to

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Computer Recycling Options for Wisconsin Businesses

As computers gain wider acceptance as an important tool among small businesses today, keeping up with the current level of technology as well as disposing of old equipment also becomes an important issue.

Disposing of old computer equipment can be a liability if a business does not take care of it in an environmentally friendly manner. All the different heavy metals contained in the computer equipment is classified as a hazardous waste if you choose to send it to a landfill or incinerator.

Businesses that want to recycle their old computers have a few options available to them in Wisconsin. To give you an idea of the services computer recycling

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New Publications From the Small Business Clean Air Assistance Program...

✔Dust, Smoke and Fumes: Particulate Matter Emissions

✔Air Acronyms - Definitions of many acronyms related to Air Pollution.

✔Modeling Emissions for Air Pollution Permits - To help understanding of a key permit review step.

✔MTE and PTE Calculation Examples

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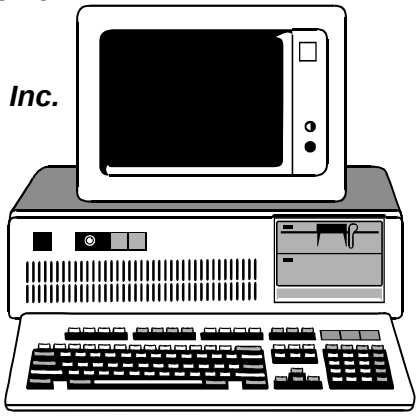
In This Issue...

Computer Recycling (continued from Page 1)

companies might offer, two are described here:

Cascade Asset Management
Cascade provides an asset management program for businesses or institutions in the Madison, WI area that need assistance in managing their electronic equipment.

While Cascade does charge a fee for processing the equipment, they also provide a rebate to you from the recycling or reuse value of the equipment. They will also pick up the equipment you wish to recycle for a fee. The hauling fee is a flat fee up to 20 miles from their site, but is then increased by $1.50 per mile when they must travel beyond that. For a list of all their fees and services, you can contact Cascade Asset Management at 1-877-271-6181 or www.cascade-assets.com.



United Recycling Industries, Inc.
The "Electronic Take-Back Program" through United Recycling Industries Inc. allows individuals and small businesses the option of recycling their old computers and gives them a discount from Compaq Computers on future purchases.

If you wish to use their service, contact United Recycling to purchase a shipping label for $27.99. Once you receive the shipping label, put your computer in a box, attach the shipping label, and take it to a UPS shipping site. The shipping label fee covers the cost to ship the computer to the West Chicago, IL facility. United Recycling will either refurbish the equipment for reuse or dismantle it for recycling. Serving Illinois, Wisconsin, Indiana, Missouri, Minnesota and Michigan, United Recycling can be reached at 1-800-270-8220 or www.unitedrecycling.com to get more information.

Other Resources
The two described here are just a couple of the options available for disposing old computers in Wisconsin. For more information, you can check the list of recyclers on DNR's web site: www.dnr.state.wi.us/org/aw/wm/Markets/category.htm. From that page you can search by material (Computers other, Whole computers and peripherals) and city to find one near you. Being on this list does not imply that DNR has inspected each of the facilities to determine whether they are meeting all the hazardous waste disposal requirements. To know if they are dealing with the wastes properly you may want to ask questions like:

✔ Whether they have all necessary state and local permits,

✔ Whether they carry sufficient liability insurance,

✔ Whether they have a Hazard Communication Plan, a Worker Safety Training Program, and a Right to Know Training program.

Affirmative answers to questions like those can indicate a good computer recycler. ❖

What are the Toxic and Hazardous Materials in Your Computer?

From the Cathode Ray Tubes (CRTs) in Monitors and Terminals:
- Lead
- Cadmium
- Other Metals

From the Printed Circuit Boards:
- Chromium
- Lead
- Beryllium
- Mercury
- Cadmium
- Nickel
- Zinc
- Silver
- Gold

From Batteries in CPUs, Laptops and Portable Printers:
- Nickel
- Cadmium
- Lithium
- Mercury
- Lead

From Relays and Switches in CPUs, Monitors and Terminals:
- Mercury

Coating Clean: Small Businesses and HAP Rules (cont. from Page 1)

avoid these new federal regulations. All of these businesses found processes that involved pollution prevention techniques allowing them to reduce their emissions. Each of these companies will not need to comply with the rule requirements when they are finalized because they reduced their emissions to such a great extent.

Case Studies

Miscellaneous Metal Parts

Coating printed circuit boards would be affected by the Miscellaneous Metal Parts and Products rule. A business that coats printed circuit boards in Tennessee switched from solvent based to UV coatings. While the coating change did involve installing all new coating applicators, ovens and testing equipment, the company said it was still more cost effective than to install add-on control devices that would have been required to meet the new HAP rule.

Another company coats metal parts for assembly on riding lawn mowers. They made a slow switch from solvent-based coatings to powder coating. First the powder coating technique was done as a trial run on some of their parts and the larger production stayed with solvent-based. As they gained experience and found success with the powder coating, they switched one of two full production lines to powder. Even on the solvent-based line, they adopted other pollution prevention techniques like using heaters to get the right paint viscosity to reduce their overall emissions. They made sufficient reductions in emissions to avoid the HAP rule requirements as well.

Fabric Printing, Coating and Dyeing

A textile manufacturing company that provides knit fabric rolls to major clothing manufacturers made a switch from solvent to water-based coatings. They apply a line of coating along each edge of the fabric to prevent it from rolling, which they call edge-gumming. This change allowed the facility to reduce their emissions sufficiently to avoid the HAP rule that would have applied to them as well. ❖

Proposed Emissions Limits for New HAP Rules

(NOTE: Limits in each category may differ for existing versus new sources.)

Miscellaneous Metal Parts and Products

	Existing	New
General Use	2.6	1.9
High Performance	27.5	27.5
Rubber-to-Metal	37.7	6.8
Magnet Wire	1.0	0.4

(each limit in pounds HAP/gal coating solids used)

Metal Furniture

	Existing	New
All coatings	0.73	0.22

(each limit in pounds HAP/gal coating solids used)

Plastic Parts and Products

(The approach and limits for this category are being revised, so no limits are available at this time.)

Fabric Coating, Printing & Dyeing

	Existing	New
Coating and Printing	0.12	0.08

(in pounds HAP/gal coating solids used)

	Existing/New	Carcinogenic
Slashing	0.01	0.001

(in pounds HAP/lb material used)

	Existing/New
Dyeing	0.016
Finishing	0.001
Dyeing and Finishing	0.016

(in pounds HAP/lb of coating solids used)

Wood Building Products

	Existing	New
Doors & Windows	1.45	0.48
Flooring	0.78	0.00
Interior Wall Paneling or Tileboard	1.53	0.04
Other Interior Panels	0.01	0.00
Exterior Siding, Doorskins, and Misc.	0.06	0.00

(in pounds HAP/gal coating solids used)

Most Common Violations Seen By DNR...

Air Program's Top 10 List

1. Not complying with Stage II vapor recovery requlrements at affected gasoline stations in Ozone non-attainment counties in southeastern Wisconsin.
2. Not complying with Asbestos Notification, Removal and Handling requirements.
3. Open burning of prohibited materials including tires, rubber products, plastics, coated wire, painted or treated wood, asphaltic materials, etc.
4. Not obtaining the proper air pollution permit, whether for construction or operation of an air pollution source.
5. Not following the required record keeping or reporting requirements as stipulated in an air permit.
6. Not meeting the requirement to control volatile organic compound emissions from process lines by 85% or to use Latest Available Control Techniques.
7. Not meeting the requirements of the state Hazardous Air Pollutant Rule in ch. NR 445.
8. Not submitting the annual air emissions inventory report.
9. Not meeting volatile organic compound emissions limits.
10. Not meeting the visible emissions limits. ❖

Hazardous Waste Program's Top 10 List

1. Not characterizing waste properly as either a hazardous or non-hazardous waste.
2. Not notifying DNR or USEPA that hazardous waste is being generated.
3. Not using a hazardous waste manifest for shipments of hazardous waste.
4. Not providing and documenting training for personnel who handle hazardous waste.
5. Not keeping the proper documentation such as material safety data sheets, annual reports, manifests, waste analysis, inspection logs, contingency plans.
6. Containers that are open, not marked, not inspected, not labeled, and/or leaking.
7. Accumulating or storing more hazardous waste on-site than allowed by generator status.
8. Improper packaging, transportation and disposal of hazardous waste.
9. Improper management and clean-up of spills and leaks of hazardous waste or materials.
10. Illegal disposal of hazardous waste without the proper license from the DNR. ❖

Do You See Yourself on One of These Lists?

Thank you to the UW-Extension Solid and Hazardous Waste Education Center (SHWEC) for sharing the Top Ten Hazardous Waste violations list from their November 2000 ***Current Developments in Waste Management***.

Is your facility guilty of any of these violations? It is important to be aware of issues like these and to respond quickly to resolve the issues.

Non-regulatory programs at the UW-Extension can help you with these hazardous waste issues. SHWEC's Web site ***www.uwex.edu/shwec***, lists all of the staff contacts and their office locations around the state. You can also contact the DNR Hazardous Waste Program for assistance on these issues. They have a Web page with staff contacts by geographic location at ***www.dnr.state.wi.us/org/aw/wm/contacts/hazard.htm***.

For any of the Air Program issues, you can contact SBCAAP at 608/264-6153 for assistance or your local DNR Air contact. If you do not know who your DNR Air contact is, SBCAAP has a fact sheet that lists Air Program regional and service center staff by topic and geographic area of responsibility. ❖

The New Ozone Standard

(continued from back page)

EPA set the new ozone standard in 1997, but there were objections to it from industrial trade groups. The industries took EPA to court and the new standard remained in the courts until the Supreme Court issued their decision on the objections in February 2001. The Supreme Court said that EPA had the authority to set the new standard but the implementation plan for the new standard was unlawful. Therefore, EPA cannot enforce the new standard until they rewrite the implementation plan.

In the end, the State Implementation Plan (SIP) for the eight-hour ozone standard in Wisconsin will look a lot like the SIP for the one-hour standard.

- ✔ Rules that require emissions reductions of VOCs and NOx from industrial sources.
- ✔ Vehicle inspection and maintenance requirements.

The major difference will be the number of counties affected by the requirements. If ozone levels are similar to the past few years, Door, Kewaunee, Manitowoc, Sheboygan, Milwaukee, Ozaukee, Racine, Kenosha, Rock and Jefferson Counties may be nonattainment for the eight-hour standard. Counties that are very close include Dodge, Washington, Waukesha, and Walworth.

Because EPA's revised implementation plan for the eight-hour ozone standard will likely end up in the courts again, it will be a number of years before any new rules are imposed in Wisconsin. One possibility is that when Wisconsin does meet the one-hour standard, the eight-hour average ozone readings will also be lower.

If industries and citizens of Wisconsin take on voluntary measures to reduce pollution over the next few years, the eight-hour ozone readings may be low enough to avoid having counties designated as nonattainment. Pollution prevention (P2) measures adopted by many industries in Wisconsin have saved them money as well as reduced their environmental burden. Contact the SBCAAP for P2 information. ❖

Electronic Compliance Assistance Resources

Electronic resources providing compliance assistance and pollution prevention information are constantly being developed by local, state and federal programs. Here are a few more resources that may assist you in your compliance efforts:

Emission Calculations

If you need to calculate the air pollution emissions from your industrial processes and want to use the most up-to-date emission factors from EPA, you can find the document called *AP-42* on the Web:

www.epa.gov/ttn/chief/ap42/index.html

Check the table of contents for the chapter on your particular industry.

Waste Reduction

We can all help reduce the amount of waste that is being sent to landfills. People certainly don't like the thought of having to build new landfills. EPA has a Consumer Handbook on ways that we can reuse products or purchase items with less waste and less environmental impact:

www.epa.gov/epaoswer/non-hw/reduce/catbook.htm

Environmental Organizations

Any business that has air and/or waste pollution issues might find a national professional organization a good resource for the latest techniques and technologies to control the pollution. One organization to join is the Air and Waste Management Association:

www.awma.org

Another organization that promotes pollution prevention options rather than controlling pollution is the Great Lakes Region Pollution Prevention Roundtable:

www.glrppr.org

Don't forget, for assistance on Wisconsin air regulations check our Web site at:

www.commerce.state.wi.us/MT/MT-CA-sbcaap.html

MACT Rule Controlling Emissions from Secondary Aluminum Production

The Environmental Protection Agency (EPA) sets standards to control hazardous air pollution through MACT standards as part of the 1990 Clean Air Act Amendments. "MACT" stands for Maximum Achievable Control Technology. MACT standards have been set by EPA for many different industry categories. The MACT requirements are based on the level of control achieved by the top 12% best controlled sources in each regulated industry.

Secondary Aluminum MACT

A MACT rule for secondary aluminum production facilities was issued on March 23, 2000. The portion of the rule that applies to *sweat furnaces* affects small businesses like scrap yards and automotive salvage operations.

Sweat Furnaces

A sweat furnace is a unit that is specifically designed to reclaim aluminum from scrap that also contains large quantities of iron. The aluminum has a lower boiling point than iron and will melt off in the furnace at the right temperature while the iron remains solid.

Scrap yards use a sweat furnace to reclaim aluminum from items like sheet and cast aluminum, while automotive salvage operations can reclaim aluminum from unusable auto parts like transmissions.

Emissions Limits

Any owner or operator of a sweat furnace must **control the emissions** of dioxin/furan (D/F) to 0.80 nanogram of D/F toxic equivalent per dry standard cubic meter (3.5×10^{-10} grain per dry standard cubic foot) at 11 percent oxygen. This would most likely mean installation of an afterburner on the furnace exhaust. An **alternate limit** is to operate an afterburner with a residence time of 0.8 seconds or greater and an operating temperature of 1600°F or greater. So if the afterburners you install have a residence time shorter than 0.8 seconds, then you will have to meet the emissions limit of 0.80 ng/dscm.

Compliance Demonstration

An initial compliance test is required to demonstrate that each afterburner can meet the level of emissions required in the limit.

If you opt for the alternate limit, you would not be required to perform an initial compliance test. The afterburner criteria in the alternate limit must be met at all times the sweat furnace is in operation.

Any afterburner used to control emissions from a sweat furnace must be monitored continuously and readings of its temperature taken every 15 minutes and averaged over each three-hour period.

If you have a sweat furnace that was constructed or reconstructed prior to February 11, 1999, then you must meet the limit by March 24, 2003. If you have a sweat furnace constructed or reconstructed after February 11, 1999, then you must have been in compliance with the limit on March 24, 2000, or upon startup, whichever is later.

Additional Information

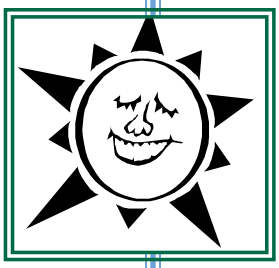
You can obtain a copy of the full Secondary Aluminum MACT rule at ***www.epa.gov/ttn/uatw/alum2nd/alum2pg.html*** or contact the SBCAAP. ❖

Hot Topics in DNR's Air Program

Check them out at: www.dnr.state.wi.us/org/aw/air/hot/index.htm

EPA Approves Wisconsin's December 2000 Submittal for its Ozone State Implementation Plan (SIP)

The Wisconsin Department of Natural Resources (DNR) submitted a revision to its Ozone SIP to the Environmental Protection Agency (EPA) in December 2000. The revision was necessary to show EPA that all the rules in place in Wisconsin would allow the state to come into attainment with the National Ambient Air Quality Standard for ozone within a certain amount of time.



DNR's submittal to EPA includes rules to reduce emissions of ozone-forming pollutants (nitrogen oxides or NOx and volatile organic compounds or VOCs), and a demonstration of how the emissions reductions reached through implementation of the rules will provide a certain level of progress each year to a final level of emissions by 2007 that will bring Wisconsin into attainment with the ozone standard.

The rules resulting in VOC emissions reductions are those described in past ***Advisor*** issues on Industrial Clean Up Solvent operations and Plastic Parts Coating processes. The compliance due date for Industrial Clean Up Solvent operations is January 1, 2002, and for Plastic Parts Coating processes is December 31, 2002.

The NOx emissions reductions are reached through both site specific emission limits for each of five large utility boilers in the nonattainment counties of Kenosha, Racine, Milwaukee, Waukesha, Washington, Ozaukee, and Sheboygan, as well as performance standards and/or emission limits for 16 industrial boilers in those same counties.

If you would like further details on any of these rules, contact the SBCAAP via the means listed on the last page of this newsletter. ❖

Natural Resources Board Authorizes Public Hearings on Mercury Reduction Rule Package

Citizens and environmental groups in Wisconsin petitioned DNR in May 2000 to address concerns about fish consumption advisories and other environmental effects that ***mercury emissions*** are causing in Wisconsin.

Mercury is a naturally occurring element but problems arise when man-made sources like coal-burning power plants release additional quanitities of mercury into the air. Mercury particles in the air combine with precipitation and fall into our lakes and rivers. Bacteria in the water convert the mercury into a form easily absorbed by fish, which is then consumed by people.

In response to the petition, DNR drafted a rule that would achieve 90% reductions in man-made emissions of mercury within 15 years.

Those affected include:
✔ Major Utilities - coal-burning power plants
✔ Major Stationary Sources - industries like industrial coal-burning boilers, waste incinerators or chlor-alkali plants that emit more than 10 pounds of mercury per year
✔ Small Sources - businesses would be encourged to achieve voluntary reductions of mercury emissions.

This proposed rule was brought before the Natural Resources Board (NRB) on June 27, 2001. The NRB decided unanimously to allow DNR to take the proposed rule out for public hearings. DNR will be holding both formal and informal public hearings. They will also form a Technical Advisory Group and a Citizens Advisory Committee to gather as much public input as possible.

If you would like more information on this rule, contact the SBCAAP. ❖

How Will Wisconsin Fare Under EPA's New Ozone Standard?

The Wisconsin Department of Natural Resources (DNR) just received full approval from the Environmental Protection Agency (EPA) for their implementation plan to bring the state into attainment with the existing one-hour ozone standard. (See article on page 7.) EPA's one-hour ozone standard addresses the concentration of ozone at ground level ("bad" ozone) because it can cause health problems. The ozone in upper levels of the atmosphere is considered "good" ozone because it protects us from the harmful ultraviolet rays of the sun.

What is Ozone?

Ozone is created when certain air pollutants (volatile organic compounds and nitrogen oxides) react with sunlight. Those air pollutants can come from natural and man-made sources, but the majority of them are man-made. Industrial sources that use paints, inks and other petroleum solvent-based products are sources of volatile organic compounds (VOCs) while those burning fossil fuels like coal, oil and gas are sources of nitrogen oxides (NOx) as well as VOCs. Vehicles are also a large source of both VOCs and NOx from the process of gasoline combustion.

What Is The New Standard?

When concentrations of ground level ozone are high, just breathing the air can cause lung damage in healthy people and often sends those with lung problems like asthma or emphesyma to the hospital. To meet the existing standard the concentration of ozone in air cannot exceed 0.125 parts per million for more than one hour in any day. The new standard for ozone is set such that the air concentration cannot exceed an average of 0.085 parts per million for any eight-hour period.

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DEPARTMENT OF COMMERCE

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Renée Lesjak Bashel,
201 W. Washington Ave.,
P.O. Box 7970,
Madison, WI 53707

Phone: 608/264-6153
Fax: 608/267-0436
E-mail: rlesjakbashel@commerce.state.wi.us

Visit us at:
http://www.commerce.state.wi.us

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